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Hirotoishi Iwasaki

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ALEXANDRIA, VA 22314

EXAMINER

LEWIS, ALICIA M

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,721	<b>Applicant(s)</b> IWASAKI ET AL.	
	<b>Examiner</b> ALICIA M. LEWIS	<b>Art Unit</b> 2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-81 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This office action is responsive to communication filed December 2, 2009.

Claims 1-24 are canceled and new claims 25-81 have been added.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 25, 26, 28, 29, 31-37, 39, 40, 42-48, 64, 65, 67-70, 73, 74, and 76-79 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato et al. (US 2003/0114968 A1) ('Sato').

With respect to claims 25 and 64, Sato teaches a method of creating a program table to define a temporal arrangement of a plurality of contents, said method comprising the steps of:

utilizing a constraint solution means to create said program table through the use of a constraint solution technique on the basis of a constraint condition related to a selection of said plurality of contents and/or a constraint condition related to a temporal arrangement of said plurality of contents (paragraphs 35-40 and 44); and

utilizing a score setting means to set priorities, when constraint falls into an excess state in constraint solution processing at the creation of said program table, with respect to said contents and/or said constraint condition so that said constraint solution processing is conducted while preferentially employing said constraint condition higher in priority (paragraphs 54-55, 82, and 111) (*Sato teaches when there is excess time (i.e. an excess state) the system modifies the program list to extend the time length. He further teaches that extended priorities are used to determine the order/priority in which programs should be extended*).

*Claims 25 and 64 recite optional claim language (i.e. "when"). The functional limitation of setting priorities only occurs if/when the constraint falls into an excess state. If the constraint does not fall into an excess state, the priorities are not set and the claims are limited to creating a program table. Thus, the limitation "utilizing a score setting means to set priorities" is optional.*

With respect to claims 26 and 65, Sato teaches a method of creating a program table to define a temporal arrangement of a plurality of contents, said method comprising the steps of:

utilizing a constraint solution means to create said program table through the use of a constraint solution technique on the basis of a constraint condition related to a selection of said plurality of contents and/or a constraint condition related to a temporal arrangement of said plurality of contents (paragraphs 35-40 and 44); and

utilizing a score setting means to set scores, when constraint falls into a shortage state in constraint solution processing at the creation of said program table, with respect to said contents and/or said constraint condition so that said constraint solution processing is conducted by making a comparison between a plurality of operation results of operations using a function in which said score is set as a parameter (paragraphs 54, 56-57, 80, and 110) (*Sato teaches when there is not enough time (i.e. a shortage state) the system modifies the program list to reduce the time length. He further teaches that shorten priorities (scores) are used to determine the order/priority in which programs should be shortened and that program numbers (scores) are used to determine which programs should be deleted*).

*Claims 26 and 65 recite optional claim language (i.e. "when"). The functional limitation of setting scores only occurs if/when the constraint falls into a shortage state. If the constraint does not fall into a shortage state, the scores are not set and the claims are limited to creating a program table. Thus, the limitation "utilizing a score setting means to set scores" is optional.*

With respect to claims 28 and 39, Sato teaches that a description of said constraint condition is made through the use of a constraint condition description function defined in advance (paragraphs 40 and 45).

With respect to claims 29 and 40, Sato teaches that user's liking information indicative of a liking of a user selects said contents is acquired as said constraint condition (paragraph 40).

With respect to claims 31 and 42, Sato teaches that information indicative of a state related to playing of said contents is acquired as said constraint condition (paragraphs 40 and 64).

With respect to claims 32 and 43, Sato teaches that said program table is created by making reference to content attribute information indicative of an attribute of each of the plurality of contents (paragraphs 23, 40 and 44).

With respect to claims 33, 44, 68, 70, 77 and 79, Sato teaches that a constraint logical programming technique is used as said constraint solution technique (paragraph 44).

With respect to claims 34 and 45, Sato teaches that an arrangement of said contents is optimized on the basis of one of a score set with respect to said contents, a correlation of attributes of said contents and a correlation of said contents or a combination thereof at the creation of said program table or after the creation thereof (paragraphs 33, 40 and 44).

With respect to claims 35 and 46, Sato teaches that said content to be disposed at a next position is determined on the basis of said content disposed at a previous position with respect to a time axis (paragraphs 45-47, 54-55 and 69).

*The claim language "to be disposed" represents an intended use of said content because the claim does not actually require the content to be disposed at the next position. Therefore, if the prior art structure is capable of performing the intended use, then it meets the claim.*

With respect to claims 36 and 47, Sato teaches that said content to be disposed at a previous position is determined on the basis of said content disposed at a next position with respect to a time axis (paragraphs 45-47, 54-56 and 69).

*The claim language "to be disposed" represents an intended use of said content because the claim does not actually require the content to be disposed at the next position. Therefore, if the prior art structure is capable of performing the intended use, then it meets the claim.*

With respect to claims 37 and 48, Sato teaches that an arrangement of said contents is determined on the basis of a pattern of said plurality of contents with respect to a time axis (Figures 3 and 5, paragraphs 44-45, 47 and 77).

With respect to claims 67, 69, 76 and 78, Sato teaches that said program table creation device is mounted in a vehicle and made to create said program table of

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programs to be watched and heard in the interior of said vehicle (paragraphs 22 and 25).

With respect to claim 73, Sato teaches a program table creation system for creating a program table defining a temporal arrangement of a plurality of contents, the system comprising:

a program table creation server existing in said predetermined network, so arranged as to create said program table through the use of a constraint solution technique on the basis of a constraint condition related to a selection of said plurality of contents and/or a constraint condition related to a temporal arrangement of said plurality of contents (paragraphs 24, 35-40 and 44), and so arranged to set priorities, when constraint falls into an excess state in constraint solution processing at the creation of said program table, with respect to said contents and/or said constraint condition so that said constraint solution processing is conducted while preferentially employing said constraint condition higher in priority (paragraphs 54-55, 82, and 111) (*Sato teaches when there is excess time (i.e. an excess state) the system modifies the program list to extend the time length. He further teaches that extended priorities are used to determine the order/priority in which programs should be extended*); and

a communication unit connectable with said predetermined network and capable of transmitting said constraint condition through said predetermined network to said program table creation server and receiving said program table created by said program table creation server (paragraphs 24 and 31).



With respect to claim 74, Sato teaches a program table creation system for creating a program table defining a temporal arrangement of a plurality of contents, the system comprising:

a program table creation server existing in said predetermined network, so arranged as to create said program table through the use of a constraint solution technique on the basis of a constraint condition related to a selection of said plurality of contents and/or a constraint condition related to a temporal arrangement of said plurality of contents (paragraphs 24, 35-40 and 44), and so arranged to set scores, when constraint falls into a shortage state in constraint solution processing at the creation of said program table, with respect to said contents and/or said constraint condition so that said constraint solution processing is conducted by making a comparison between a plurality of operation results of operations using a function in which said score is set as a parameter (paragraphs 54, 56-57, 80, and 110) (*Sato teaches when there is not enough time (i.e. a shortage state) the system modifies the program list to reduce the time length. He further teaches that shorten priorities (scores) are used to determine the order/priority in which programs should be shortened and that program numbers (scores) are used to determine which programs should be deleted*); and

a communication unit connectable with said predetermined network and capable of transmitting said constraint condition through said predetermined network to said program table creation server and receiving said program table created by said program table creation server (paragraphs 24 and 31).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 30 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2003/0114968 A1) ('Sato') in view of Thielen (US 2004/0117442 A1).

With respect to claims 30 and 41, Sato teaches acquiring a constrain condition (paragraphs 35-40 and 44).

Sato does not teach that said constraint condition is automatically acquired by automatically generating said user's liking information through learning of said user's liking.

Thielen teaches a handheld portable wireless digital content player (see abstract), in which he teaches that said constraint condition is automatically acquired by automatically generating said user's liking information through learning of said user's liking (paragraph 183, 156 and 163).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Sato by the teaching of Thielen because automatically acquiring by automatically generating said user's liking information

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through learning of said user's liking would enable a more efficient audio apparatus by eliminating the need of a user to have to input preferences manually (Thielen, paragraph 183), and would also enable a multi-purpose player that functions as a portable, vehicle and at home digital content player (Thielen, paragraph 46-47).

5. Claim 27, 50, 51, 53-62, 66, 71, 72, 75, 80 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2003/0114968 A1) ('Sato') in view of Chasen et al. (US 6,760,721 B1) ('Chasen').

With respect to claims 27 and 66, Sato teaches a method of creating a program table to define a temporal arrangement of a plurality of content, said method comprising the steps of:

utilizing a constraint solution means to create said program table through the use of a constraint solution technique on the basis of a constraint condition related to a selection of said plurality of contents and/or a constraint condition related to a temporal arrangement of said plurality of contents (paragraphs 35-40 and 44), so that said program table satisfies constraint conditions related to whole time width of said program table and time widths of said elements on a same hierarchy (paragraphs 40 and 43-44).

Although Sato teaches said program table data, Sato does not teach utilizing a tree structuring means to express said program table by a tree structure having one or a plurality of hierarchies in which elements indicative of said contents constituting said program table are disposed in a lowest-rank layer and elements summarizing features

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of lower-rank elements are disposed in a rank higher with respect to the elements indicative of said contents.

Chasen teaches a system and method of managing metadata data (see abstract), in which he teaches utilizing a tree structuring means to express said program table by a tree structure having one or a plurality of hierarchies in which elements indicative of said contents constituting said table are disposed in a lowest-rank layer (*i.e. track names*) and elements summarizing features of lower-rank elements (*i.e. albums, artist, genre*) are disposed in a rank higher with respect to the elements indicative of said contents (col. 3 line 59 – col. 4 line 8, Table 1 in column 11, and “Groupings Tree” in columns 13-14).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Sato by the teaching of Chasen because a utilizing a tree structuring means to express said program table by a tree structure having one or a plurality of hierarchies in which elements indicative of said contents constituting said program table are disposed in a lowest-rank layer and elements summarizing features of lower-rank elements are disposed in a rank higher with respect to the elements indicative of said contents would enable a user to easily access and view data by arranging data in a hierarchical arrangement. For example, groupings tree provide ways to group and categorize audio data and playlist trees provide ways to create and provide ordered lists of audio tracks (Chasen, col. 3 lines 66-67, col. 4 lines 7-8).

*The Examiner would like to note that claims 27 and 66 recite nonfunctional descriptive material that has no patentable weight. The limitation “utilizing a tree structuring means to express said program table by a tree structure” of claims 27 and 66 represents an arrangement of data (i.e. in a tree structure) that do no impart any functionality to the claims. The way in which the data is arranged does not affect the way a system/computer operates, nor does it cause anything to happen in a computer. As such, this limitation holds no patentable weight. However, for the purposes of compact prosecution, the Examiner has applied art.*

With respect to claim 50, Sato in view of Chasen teaches that a description of said constraint condition is made through the use of a constraint condition description function defined in advance (Sato, paragraphs 40 and 45).

With respect to claim 51, Sato in view of Chasen teaches that user's liking information indicative of a liking of a user selects said contents is acquired as said constraint condition (Sato, paragraph 40).

With respect to claim 53, Sato in view of Chasen teaches that information indicative of a state related to playing of said contents is acquired as said constraint condition (Sato, paragraphs 40 and 64).

With respect to claim 54, Sato in view of Chasen teaches that said program table is created by making reference to content attribute information indicative of an attribute of each of the plurality of contents (Sato, paragraphs 23, 40 and 44).

With respect to claims 55, 72 and 81 Sato in view of Chasen teaches that a constraint logical programming technique is used as said constraint solution technique (Sato, paragraph 44).

With respect to claim 56, Sato in view of Chasen teaches that said elements associated with each other in higher-rank and lower-rank layers have attribute information or time width information consistent with each other (Chasen, col. 3 line 59 – col. 4 line 8, Table 1 in column 11, and “Groupings Tree” in columns 13-14) (*In the Genre/Artist/Album groupings sub tree in col. 13-14, elements in lower and higher ranks each have consistent genre attribute information. For example, in the funk sub-tree, all elements below the funk node have a funk genre*).

*The Examiner would like to note that claim 56 recites nonfunctional descriptive material that has no patentable weight. The limitations of claim 56 represent an arrangement of data (i.e. in a tree structure) that do no impart any functionality to the claimed method. The way in which the data is arranged does not affect the way a system/computer operates, nor does it cause anything to happen in a computer. As such, claim 56 holds no patentable weight. However, for the purposes of compact prosecution, the Examiner has applied art.*

With respect to claim 57, Sato in view of Chasen teaches that a portion of said program table is rearranged on the basis of said tree structure (Sato, paragraphs 88, 110 and 111) while said elements associated with each other in higher-rank and lower-rank layers keep attribute information or time width information consistent with each other (Chasen, col. 3 line 59 – col. 4 line 8, Table 1 in column 11, and “Groupings Tree” in columns 13-14).

With respect to claim 58, Sato in view of Chasen teaches that the rearrangement of the portion of said program table is made by employing one of a method of deriving a new solution through the use of a previous solution or a method of deriving a new solution through the use of a history related to a previous solution derivation, or by employing a combination of these methods (Sato, paragraphs 88, 110 and 111).

With respect to claim 59, Sato in view of Chasen teaches that an arrangement of said contents is optimized on the basis of one of a score set with respect to said contents, a correlation of attributes of said contents and a correlation of said contents or a combination thereof at the creation of said program table or after the creation thereof (Sato, paragraphs 33, 40 and 44).

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With respect to claim 60, Sato in view of Chasen teaches that said content to be disposed at a next position is determined on the basis of said content disposed at a previous position with respect to a time axis (Sato, paragraphs 45-47, 54-55 and 69).

*The claim language "to be disposed" represents an intended use of said content because the claim does not actually require the content to be disposed at the next position. Therefore, if the prior art structure is capable of performing the intended use, then it meets the claim.*

With respect to claim 61, Sato in view of Chasen teaches that said content to be disposed at a previous position is determined on the basis of said content disposed at a next position with respect to a time axis (Sato, paragraphs 45-47, 54-56 and 69).

*The claim language "to be disposed" represents an intended use of said content because the claim does not actually require the content to be disposed at the next position. Therefore, if the prior art structure is capable of performing the intended use, then it meets the claim.*

With respect to claim 62, Sato in view of Chasen teaches that an arrangement of said contents is determined on the basis of a pattern of said plurality of contents with respect to a time axis (Sato, Figures 3 and 5, paragraphs 44-45, 47 and 77).

With respect to claims 71 and 80, Sato in view of Chasen teaches that said program table creation device is mounted in a vehicle and made to create said program



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table of programs to be watched and heard in the interior of said vehicle (Sato, paragraphs 22 and 25).

With respect to claim 75, Sato teaches a program table creation system for creating a program table defining a temporal arrangement of a plurality of contents, the system comprising:

a program table creation server existing in said predetermined network, so arranged as to create said program table through the use of a constraint solution technique on the basis of a constraint condition related to a selection of said plurality of contents and/or a constraint condition related to a temporal arrangement of said plurality of contents (paragraphs 24, 35-40 and 44), so that said program table satisfies constraint conditions related to whole time width of said program table and time widths of said elements on a same hierarchy (paragraphs 40 and 43-44); and

a communication unit connectable with said predetermined network and capable of transmitting said constraint condition through said predetermined network to said program table creation server and receiving said program table created by said program table creation server (paragraphs 24 and 31).

Although Sato teaches said program table data, Sato does not teach utilizing a tree structuring means to express said program table by a tree structure having one or a plurality of hierarchies in which elements indicative of said contents constituting said program table are disposed in a lowest-rank layer and elements summarizing features

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of lower-rank elements are disposed in a rank higher with respect to the elements indicative of said contents.

Chasen teaches a system and method of managing metadata data (see abstract), in which he teaches utilizing a tree structuring means to express said program table by a tree structure having one or a plurality of hierarchies in which elements indicative of said contents constituting said table are disposed in a lowest-rank layer (*i.e. track names*) and elements summarizing features of lower-rank elements (*i.e. albums, artist, genre*) are disposed in a rank higher with respect to the elements indicative of said contents (col. 3 line 59 – col. 4 line 8, Table 1 in column 11, and “Groupings Tree” in columns 13-14).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Sato by the teaching of Chasen because a utilizing a tree structuring means to express said program table by a tree structure having one or a plurality of hierarchies in which elements indicative of said contents constituting said program table are disposed in a lowest-rank layer and elements summarizing features of lower-rank elements are disposed in a rank higher with respect to the elements indicative of said contents would enable a user to easily access and view data by arranging data in a hierarchical arrangement. For example, groupings tree provide ways to group and categorize audio data and play list trees provide ways to create and provide ordered lists of audio tracks (Chasen, col. 3 lines 66-67, col. 4 lines 7-8).

*The Examiner would like to note that claim 75 recites nonfunctional descriptive material that has no patentable weight. The limitation “utilizing a tree structuring means to express said program table by a tree structure” of claim 75 represents an arrangement of data (i.e. in a tree structure) that do no impart any functionality to the claims. The way in which the data is arranged does not affect the way a system/computer operates, nor does it cause anything to happen in a computer. As such, this limitation holds no patentable weight. However, for the purposes of compact prosecution, the Examiner has applied art.*

6. Claims 38 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2003/0114968 A1) ('Sato') in view of Foote et al. (US 2003/0205124 A1) ('Foote').

With respect to claims 38 and 49, Sato teaches the program table creation method according to claims 25 and 26.

Sato does not teach an arrangement of said contents is changed by making reference to content attribute information indicative of attributes of said contents so that a correlation between said contents adjacent to each other reaches a maximum as a whole.

Foote teaches a method and system for retrieving and sequencing music by rhythmic similarity (see abstract), in which he teaches an arrangement of said contents is changed by making reference to content attribute information indicative of attributes

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of said contents so that a correlation between said contents adjacent to each other reaches a maximum as a whole (paragraphs 97-98, 109 and 111).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Sato by the teaching of Foote because an arrangement of said contents is changed by making reference to content attribute information indicative of attributes of said contents so that a correlation between said contents adjacent to each other reaches a maximum as a whole would enable a smooth transition between content, such as music files (Foote, paragraphs 97-98).

7. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2003/0114968 A1) ('Sato') in view of Chasen et al. (US 6,760,721 B1) ('Chasen'), as applied to claims 27, 50, 51, 53-62, 66, 71, 72, 75, 80 and 81 above, and further in view of Thielen (US 2004/0117442 A1).

With respect to claim 52, Sato in view of Chasen teaches acquiring a constrain condition (paragraphs 35-40 and 44).

Sato in view of Chasen does not teach that said constraint condition is automatically acquired by automatically generating said user's liking information through learning of said user's liking.

Thielen teaches a handheld portable wireless digital content player (see abstract), in which he teaches that said constraint condition is automatically acquired by

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automatically generating said user's liking information through learning of said user's liking (paragraph 183,156 and 163).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Sato by the teaching of Thielen because automatically acquiring by automatically generating said user's liking information through learning of said user's liking would enable a more efficient audio apparatus by eliminating the need of a user to have to input preferences manually (Thielen, paragraph 183), and would also enable a multi-purpose player that functions as a portable, vehicle and at home digital content player (Thielen, paragraph 46-47).

8. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2003/0114968 A1) ('Sato') in view of Chasen et al. (US 6,760,721 B1) ('Chasen'), as applied to claims 27, 50, 51, 53-62, 66, 71, 72, 75, 80 and 81 above, and further in view of Foote et al. (US 2003/0205124 A1) ('Foote').

With respect to claim 63, Sato in view of Chasen teaches the method according to claim 27.

Sato in view of Chasen does not teach an arrangement of said contents is changed by making reference to content attribute information indicative of attributes of said contents so that a correlation between said contents adjacent to each other reaches a maximum as a whole.

Foote teaches a method and system for retrieving and sequencing music by rhythmic similarity (see abstract), in which he teaches an arrangement of said contents is changed by making reference to content attribute information indicative of attributes of said contents so that a correlation between said contents adjacent to each other reaches a maximum as a whole (paragraphs 97-98, 109 and 111).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Sato by the teaching of Foote because an arrangement of said contents is changed by making reference to content attribute information indicative of attributes of said contents so that a correlation between said contents adjacent to each other reaches a maximum as a whole would enable a smooth transition between content, such as music files (Foote, paragraphs 97-98).

### ***Response to Arguments***

9. Applicant's arguments filed December 2, 2009 have been fully considered but they are not persuasive. Applicant argues that Sato fails to teach setting priorities when constraint falls into an excess state, and further that this limitation is not optional. Examiner disagrees. Sato teaches that when there is excess time (i.e. an excess state) the system modifies the program list to extend the time length based on priorities (paragraphs 54-55). Sato further teaches that extend priority orders are set for individual contents of information. When the system goes into an extend mode, the extend priority order is used to determine the order or priority and length that programs should be extended (paragraphs 81-82). Therefore, priorities are set in the sense that

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extend priority orders are read from the table and used to recalculate the program list with the proper programs and lengths in the proper order.

10. Further, as explained above, "when" claim language is optional. The claim language "when" is synonymous to "if" claim language, in that a limitation only occurs if or when another condition is met. If/when the condition is not met, the claimed limitation does not occur. For example, in claim 25, if the constraint does not fall into an excess state, the priorities will not be set. There is no limitation in claim 25 that explicitly requires priorities to be set every time because there is no limitation that requires an excess state to be reached every time. The interpretation is upheld throughout the office action wherever "when" claim language is used.

11. Applicant argues that Sato fails to teach setting scores when constraint falls into a shortage state, and further that this limitation is not optional. Examiner disagrees. Sato teaches that when there is not enough time (i.e. a shortage state) the system modifies the program list to reduce the time length based on priorities (paragraphs 54, 56-57). Sato further teaches that shorten priority orders are set for individual contents of information. When the system goes into a shorten mode, the shorten priority order is used to determine the order or priority and length that programs should be shortened (paragraphs 80 and 110). Therefore, scores (priorities) are set in the sense that shorten priority orders are read from the table and used to recalculate the program list with the proper programs and lengths in the proper order.

12. Lastly, Applicant argues that Sato and Chasen fail to teach constraint conditions specific to hierarchical architecture (i.e. conditions related to whole time width of said

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program table and time widths of said elements on a same hierarchy). Examiner disagrees. Claims 27, 66 and 75 each recite a tree structure having one or a plurality of hierarchies. A structure having one hierarchical level is simply a flat structure as seen in Sato. Further Sato teaches that a program list is generated that is equivalent to the estimated length of time for travel (paragraph 43). Thus, the program table does satisfy constraint conditions related to whole time width of said program table. Further, the program list incorporates different constraint conditions (i.e. weather, traffic, news and music) along with any specific time requests relating to those conditions (paragraphs 35-40). Therefore, time widths of elements on a same hierarchy are also satisfied. Lastly, Chasen teaches a tree structure having several hierarchies, with program table elements at a lowest rank and summarizing features at a higher rank ('Groupings Tree' in columns 13-14).

### ***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALICIA M. LEWIS whose telephone number is (571)272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. M. L./  
Examiner, Art Unit 2164  
March 13, 2010

/Charles Rones/

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Supervisory Patent Examiner, Art Unit 2164